AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Original): A method for settling an auction of contracts comprising:

   accessing an auction pool defining orders for contracts collected during an auction;

   setting an auction settlement price (ASP) for each contract in the auction pool; and

   after the ASPs have been set, filling orders in the auction pool based on the ASPs.

2. (New): A method for settling an auction pool of orders for contracts, the method comprising:

   setting auction settlement prices (ASPs) for contracts in the auction pool; and

   after the ASPs have been set, filling orders in the auction pool based on the ASPs.

3. (New): The method of claim 2 wherein the step of filling orders in the auction pool uses the ASPs but otherwise occurs independent of the step of setting the ASPs.

4. (New): The method of claim 2 wherein the step of setting the ASPs comprises:

   selecting a price-setting pool based on the auction pool; and

   setting the ASPs based on orders in the price-setting pool.

5. (New): The method of claim 4 wherein the step of setting the ASPs based on orders in the price-setting pool comprises:

   setting the ASPs without iterating the ASPs or the price-setting pool.

6. (New): The method of claim 4 wherein the step of setting the ASPs based on orders in the price-setting pool comprises:

   setting initial implied contract prices (ICPs) based on orders in the price-setting pool;

iterating the ICPs and the price-setting pool for consistency between the ICPs and the

price-setting pool;

and setting the ASPs based on the iterated ICPs.

7.   (New): The method of claim 4 wherein the price-setting pool contains significantly fewer orders than the auction pool.

8.   (New): The method of claim 4 wherein the step of filling orders in the auction pool does not require filling all of the orders in the price-setting pool.

9.   (New): The method of claim 2 wherein the step of setting the ASPs comprises:

forming complete sets from orders in the auction pool; and

setting the ASPs based on the complete sets.

10. (New): The method of claim 2 wherein the step of setting the ASPs comprises:

selecting sample orders from the auction pool; and

setting the ASPs based on the selected sample orders.

11. (New): The method of claim 2 wherein the step of setting the ASPs comprises:

setting the ASPs based on a predetermined subset of orders from the auction pool.

12. (New): The method of claim 2 wherein the step of setting the ASPs comprises:

setting initial ASPs;

iterating the ASPs; and

halting the iteration before the ASPs have completely converged.

13. (New): The method of claim 2 wherein the step of setting the ASPs comprises:

setting the ASPs based on factors external to the auction pool.

14. (New): The method of claim 2 wherein the step of filling orders comprises:

filling orders according to an aggressiveness of the orders.

15. (New): The method of claim 14 wherein the step of filling orders comprises:

filling orders according to a price aggressiveness of the orders.

16. (New): The method of claim 2 wherein the step of filling orders comprises:

determining a qualified pool of orders that meet the ASPs; and

filling orders from the qualified pool.

17. (New): The method of claim 16 wherein the step of filling orders comprises:

filling orders in complete sets.

18. (New): The method of claim 17 wherein the step of filling orders comprises:

adding orders to the qualified pool to form complete sets with residual unmatched orders

in the qualified pool.

19. (New): The method of claim 2 wherein:

the step of setting ASPs for contracts in the auction pool comprises:

decomposing contracts in the auction pool into combinations of basic units; and

setting ASPs for the basic units; and

the step of filling orders in the auction pool comprises:

forming complete sets of basic units.

20. (New): A method for settling an auction pool of orders for contracts, the method comprising:

forming complete sets from orders in the auction pool; and

settling the auction pool based on the complete sets.

21. (New): The method of claim 20 wherein the step of settling the auction pool comprises:

setting auction settlement prices based on the complete sets.

22. (New): The method of claim 20 wherein the step of settling the auction pool comprises:

filling orders based on the complete sets.

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23. (New): The method of claim 22 wherein the filled orders form complete sets that have an order price that is at least as price aggressive as a settlement value of the complete set.

24. (New): The method of claim 22 wherein the filled orders form an integer number of complete sets with no residual unmatched orders.

25. (New): The method of claim 20 wherein the step of forming complete sets from orders in the auction pool comprises:

decomposing orders in the auction pool into combinations of basic units; and

forming complete sets of basic units.

26. (New): The method of claim 25 wherein the basic units are mutually exclusive and collectively exhaustive.

27. (New): A method for settling an auction pool of orders for contracts, the method comprising:

conducting a price auction to set auction settlement prices (ASPs) for contracts in the

auction pool according to a mutualized risk price setting mechanism; and

conducting a separate quantity auction to fill orders in the auction pool based on the

ASPs.

28. (New): The method of claim 27 wherein the step of conducting a price auction comprises:

selecting an initial price-setting pool from the orders in the auction pool;

setting implied contract prices (ICPs) based on the price-setting pool, according to a

mutualized risk price setting mechanism;

adjusting the price-setting pool based on the ICPs; and

iterating the steps of setting the ICPs and adjusting the price-setting pool.

29. (New): The method of claim 27 wherein:

the auction pool includes both long orders and short orders; and

the step of conducting a price auction comprises:

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes only long orders or only short orders; and

setting the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

30. (New): The method of claim 27 wherein:

the auction pool includes both long orders and short orders; and

the step of conducting a price auction comprises:

converting at least some of the short/long orders into equivalent long/short orders;

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes only long/short orders and equivalent long/short orders; and

setting the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

31. (New): The method of claim 27 wherein:

the auction pool includes contract quantity orders with quantity limits and price limits; and

the step of conducting a price auction comprises:

converting at least some of the contract quantity orders into equivalent investment amount orders;

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes the equivalent investment amount orders; and

setting the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

32. (New): The method of claim 27 wherein:

the auction pool includes combinational orders; and

the step of conducting a price auction comprises:

    converting at least some of the combinational orders into non-combinational

        orders according to an allocation policy for the combinational order;

    selecting a price-setting pool from the orders in the auction pool, where the price-

        setting pool includes the non-combinational orders; and

    setting the ASPs based on the price-setting pool, according to a mutualized risk

        price setting mechanism.

33. (New): A method for settling an auction pool of orders for contracts, the method comprising:

    setting auction settlement prices (ASPs) for contracts in the auction pool according to a

        Dutch auction of complete sets formed from orders in the auction pool; and

    filling orders in the auction pool based on the ASPs.

34. (New): The method of claim 33 wherein the step of setting ASPs comprises:

    beginning with an empty price-setting pool;

    adding complete sets to the price-setting pool, wherein the complete sets are formed from

        orders in the auction pool and are added to the price-setting pool according to

        price aggressiveness, and only complete sets that have an order price that is at

        least as price aggressive as a settlement value of the complete set are added to the

        price-setting pool; and

    setting the ASPs according to the order prices of orders in the price-setting pool.

35. (New): The method of claim 34 wherein the step of setting ASPs according to the order prices of orders in the price-setting pool comprises:

    setting ASPs according to the order prices of one or more least aggressive complete sets

        in the price-setting pool.

36. (New): The method of claim 33 wherein:

    the auction pool includes both long orders and short orders; and

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the step of setting ASPs comprises:

converting at least some of the short/long orders into equivalent long/short orders; and

setting the ASPs according to a Dutch auction of complete sets formed from orders in the auction pool, wherein the converted short/long orders are treated as the equivalent long/short orders for purposes of the Dutch auction.

37. (New): The method of claim 33 wherein

the auction pool includes investment amount orders; and

the step of setting ASPs comprises:

converting at least some of the investment amount orders into equivalent contract quantity orders; amd

setting the ASPs according to a Dutch auction of complete sets formed from orders in the auction pool, wherein the converted investment amount orders are treated as the equivalent contract quantity orders for purposes of the Dutch auction.

38. (New): A method for settling an auction pool of orders for contracts, the method comprising:

conducting a price auction to set auction settlement prices (ASPs) for contracts in the auction pool; and

conducting a separate quantity auction to fill orders in the auction pool by forming complete sets based on the ASPs.

39. (New): The method of claim 38 wherein the step of conducting a separate quantity auction comprises:

determining a qualified pool from the auction pool based on the ASPs, wherein orders in the qualified pool are consistent with the ASPs; and

filling orders from the qualified pool by forming complete sets in order of aggressiveness of the orders in the qualified pool.

40. (New): The method of claim 39 wherein complete sets are formed in order of price aggressiveness of the orders in the qualified pool.

41. (New): The method of claim 39 wherein the step of forming complete sets in order of aggressiveness of the orders in the qualified pool comprises:

forming complete sets in order of aggressiveness without breaking combinational orders; and

then filling at least some of the residual orders in order of aggressiveness, by adding additional orders to form complete sets with the residual orders.

42. (New): The method of claim 41 wherein the step of filling at least some of the residual orders comprises:

beginning with the most aggressive residual orders, adding additional orders to form complete sets until a limit on additional orders is met.

43. (New): The method of claim 41 wherein the step of filling at least some of the residual orders comprises:

adding additional orders to form complete sets with all of the residual orders; and

beginning with the least aggressive residual orders, removing the added additional orders until a limit on additional orders is met.

44. (New): The method of claim 38 wherein the step of conducting a separate quantity auction comprises:

determining a qualified pool from the auction pool based on the ASPs, wherein orders in the qualified pool are consistent with the ASPs;

ranking the orders in the qualified pool according to a predefined criteria; and

filling orders from the qualified pool by forming complete sets in order of the ranking.

45. (New): The method of claim 38 wherein the filled orders form an integer number of complete sets and no residual unmatched orders are filled.

46. (New): The method of claim 38 wherein the step of conducting a separate quantity auction comprises:

        determining a qualified pool from the auction pool based on the ASPs, wherein orders in the qualified pool are consistent with the ASPs;

        beginning with the most aggressive orders in the qualified pool, forming complete sets and adding additional orders to form complete sets until a limit on additional orders is met.

47. (New): The method of claim 38 wherein the step of conducting a separate quantity auction comprises:

        determining a qualified pool from the auction pool based on the ASPs, wherein orders in the qualified pool are consistent with the ASPs;

        adding additional orders to form complete sets with all of the orders in the qualified pool; and

        beginning with the least aggressive orders in the qualified pool, removing the added additional orders until a limit on additional orders is met.

48. (New): An auction system comprising:

        a database containing an auction pool of orders for contracts;

        a price auction module communicably coupled to the database, for setting auction settlement prices (ASPs) for contracts in the auction pool; and

        a quantity auction module communicably coupled to the database for filling orders in the auction pool based on the ASPs set by the price auction module.

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49. (New): The auction system of claim 48 wherein the price auction module selects a price-setting pool based on the auction pool and sets the ASPs based on orders in the price-setting pool.

50. (New): The auction system of claim 49 wherein the price-setting pool has signifantly fewer orders than the auction pool.

51. (New): The auction system of claim 49 wherein the price-setting pool contains a predetermined subset of orders from the auction pool.

52. (New): The auction system of claim 48 wherein the price auction module sets the ASPs based on factors external to the auction pool.

53. (New): The auction system of claim 48 wherein the quantity auction module fills orders according to an aggressiveness of the orders.

54. (New): The auction system of claim 53 wherein the quantity auction module fills orders according to a price aggressiveness of the orders.

55. (New): The auction system of claim 48 wherein the quantity auction module determines a qualified pool of orders that meet the ASPs and fills orders from the qualified pool.

56. (New): A computer readable medium containing software instructions to cause a processor to execute the steps of:

    accessing an auction pool of orders for contracts;

    determining auction settlement prices (ASPs) for contracts in the auction pool according to a mutualized risk price setting mechanism; and

    storing the ASPs.

57. (New): The computer readable medium of claim 56 wherein the step of determining ASPs comprises:

selecting an initial price-setting pool from the orders in the auction pool;

determining implied contract prices (ICPs) based on the price-setting pool, according to a mutualized risk price setting mechanism;

adjusting the price-setting pool based on the ICPs; and

iterating the steps of determining the ICPs and adjusting the price-setting pool.

58. (New): The computer readable medium of claim 56 wherein, if the auction pool includes both long orders and short orders, then the step of determining ASPs comprises:

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes only long orders or only short orders; and

determining the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

59. (New): The computer readable medium of claim 56 wherein, if the auction pool includes both long orders and short orders, then the step of determining ASPs comprises:

converting at least some of the short/long orders into equivalent long/short orders;

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes only long/short orders and equivalent long/short orders; and

determining the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

60. (New): The computer readable medium of claim 56 wherein, if the auction pool includes contract quantity orders with quantity limits and price limits, then the step of conducting a price auction comprises:

converting at least some of the contract quantity orders into equivalent investment amount orders;

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes the equivalent investment amount orders; and

determining the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

61. (New): The computer readable medium of claim 56 wherein, if the the auction pool includes combinational orders, then the step of conducting a price auction comprises:

converting at least some of the combinational orders into non-combinational orders according to an allocation policy for the combinational order;

selecting a price-setting pool from the orders in the auction pool, where the price-setting pool includes the non-combinational orders; and

determining the ASPs based on the price-setting pool, according to a mutualized risk price setting mechanism.

62. (New): A computer readable medium containing software instructions to cause a processor to execute the steps of:

accessing an auction pool of orders for contracts;

determining auction settlement prices (ASPs) for contracts in the auction pool according to a Dutch auction of complete sets formed from orders in the auction pool; and

filling orders in the auction pool based on the ASPs.

63. (New): The computer readable medium of claim 62 wherein the step of determining ASPs comprises:

beginning with an empty price-setting pool;

adding complete sets to the price-setting pool, wherein the complete sets are formed from orders in the auction pool and are added to the price-setting pool according to price aggressiveness, and only complete sets that have an order price that is at least as price aggressive as a settlement value of the complete set are added to the price-setting pool; and

determining the ASPs according to the order prices of orders in the price-setting pool.

64. (New): The computer readable medium of claim 63 wherein the step of determining ASPs according to the order prices of orders in the price-setting pool comprises:

determining ASPs according to the order prices of one or more least aggressive complete sets in the price-setting pool.

65. (New): The computer readable medium of claim 62 wherein, if the auction pool includes both long orders and short orders, then the step of determining ASPs comprises:

converting at least some of the short/long orders into equivalent long/short orders; and

determining the ASPs according to a Dutch auction of complete sets formed from orders in the auction pool, wherein the converted short/long orders are treated as the equivalent long/short orders for purposes of the Dutch auction.

66. (New): The computer readable medium of claim 62 wherein, if the auction pool includes investment amount orders, then the step of determining ASPs comprises:

converting at least some of the investment amount orders into equivalent contract quantity orders; amd

determining the ASPs according to a Dutch auction of complete sets formed from orders in the auction pool, wherein the converted investment amount orders are treated as the equivalent contract quantity orders for purposes of the Dutch auction.

67. (New): An auction system for settling an auction pool of orders for contracts, the system comprising:

a price auction module for setting auction settlement prices (ASPs) for contracts in the auction pool; and

a quantity auction module communicably coupled to the price auction module for filling orders in the auction pool based on forming complete sets consistent with the ASPs.

68. (New): The auction system of claim 67 wherein the quantity auction module selects a qualified pool from the auction pool based on consistency with the ASPs, and fills qualified orders by forming complete sets in order of aggressiveness.

69. (New): The auction system of claim 68 wherein the quantity auction module forms and fills complete sets in order of aggressiveness without breaking combinational orders, and also fills at least some of the residual orders in order of aggressiveness.

70. (New): The auction system of claim 67 wherein the quantity auction module selects a qualified pool from the auction pool based on consistency with the ASPs, and fills qualified orders by forming complete sets in order of ranking according to a predefined criteria.

71. (New): The auction system of claim 67 wherein the quantity auction module selects a qualified pool from the auction pool based on consistency with the ASPs and, in order of most to least aggressive, fills qualified orders forming complete sets and fills qualified residual orders subject to a limit on the filled residual orders.

72. (New): The auction system of claim 67 wherein the quantity auction module selects a qualified pool from the auction pool based on consistency with the ASPs, tentatively fills all qualified orders, and then unfills qualified residual orders in order of increasing aggressiveness until a limit on filled residual orders is met.